IRELL & MANELLA LLP
David I. Gindler (117824)
dgindler@irell.com
Alan J. Heinrich (212782)
aheinrich@irell.com
Lisa S. Glasser (223406)
lglasser@irell.com
Sandra L. Haberny (260977)
shaberny@irell.com
1800 Avenue of the Stars, Suite 900
Los Angeles, California 90067-4276
Telephone: (310) 277-1010
Facsimile: (310) 203-7199

Attorneys for Defendant and
Counterclaim-Plaintiff
ARIOSA DIAGNOSTICS, INC.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

VERINATA HEALTH, INC.,

Plaintiff and Counterclaim-Defendant,

vs.

ARIOSA DIAGNOSTICS, INC.,

Defendant and Counterclaim-Plaintiff.

ILLUMINA, INC.,

Plaintiff and Counterclaim-Defendant

vs.

ARIOSA DIAGNOSTICS, INC.,

Defendant and Counterclaim-Plaintiff.

Lead Case No. 3:12-cv-05501-SI
Case No. 3:14-cv-01921-SI
Case No. 3:15-cv-02216-SI

ARIOSA DIAGNOSTICS, INC.'S, NOTICE OF MOTION AND MOTION FOR JUDGMENT AS A MATTER OF LAW UNDER RULE 50(a); MEMORANDUM IN SUPPORT

Judge: Hon. Susan Illston

ILLUMINA, INC.,	)
	)
Plaintiff and Counterclaim-Defendant	)
	)
vs.	)
	)
ARIOSA DIAGNOSTICS, INC.,	)
	)
Defendant and Counterclaim-Plaintiff.	)
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NOTICE OF MOTION AND MOTION

PLEASE TAKE NOTICE that on January 17, 2018 at the close of Plaintiffs Illumina, Inc.'s and Verinata Health, Inc.'s (collectively "Plaintiffs") case-in-chief, in Courtroom 1 before the Honorable Judge Susan Illston, 450 Golden Gate Avenue, San Francisco, California, Defendant and Counterclaim Plaintiff Ariosa Diagnostics, Inc. ("Ariosa") moved for judgment as a matter of law pursuant to Fed. R. Civ. P. 50(a). Ariosa articulated grounds for this motion orally on the record and submits this memorandum in further support of the motion.[1]

This Motion is made on the basis that Plaintiffs Illumina and Verinata failed to provide a legally sufficient evidentiary basis for a reasonable jury to find in favor of Plaintiffs on infringement, willfulness and damages. Specifically, Plaintiffs failed to offer evidence on which the jury could (1) find that Ariosa infringed either the '430 and '794 patents, (2) find that Ariosa willfully infringed the '430 and '794 patents, and (3) find in favor of Plaintiffs on damages and award lost profits and reasonable royalty damages as Plaintiffs have requested.

This Motion is based on the testimony and evidence admitted at trial, the oral motion for judgment as a matter of law made during trial, the Memorandum of Points and Authorities that follows, all pleadings, exhibits, and records in this action, and such other papers, evidence, and/or argument as may be submitted to the Court in connection with this Motion or that the Court may take notice or otherwise consider.

MEMORANDUM OF POINTS AND AUTHORITIES

I. INTRODUCTION

Ariosa moves for judgment as a matter of law ("JMOL") in its favor pursuant to Rule 50(a) of the Federal Rules of Civil Procedure. Plaintiffs' case is fundamentally deficient on infringement, willfulness, and damages. Ariosa therefore brings this motion because "there is no legally sufficient evidentiary basis for a reasonable jury" to (1) find that Ariosa infringed the '430

[1] After Ariosa presents its case and before the case is submitted to the jury, Ariosa expects to request judgment as a matter of law on other matters where such relief may be appropriate, including Ariosa's claims for breach of contract, invalidity of the '430 and '794 patents, and other defenses. The current motion is brought with respect to deficiencies in Plaintiffs' case-in-chief, without waiving other matters on which Ariosa may be entitled to JMOL.

and '794 patents, (2) find that Ariosa willfully infringed the '430 and '794 patents, and (3) award either lost profits or reasonable royalty damages to Plaintiffs for Ariosa's alleged infringement of the '430 and '794 patents.

II. ARGUMENT

Judgment as a matter of law is appropriate if "a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." Fed. R. Civ. P. 50(a). In making this determination, "the court should review all of the evidence in the record, not merely the evidence favorable to the non-moving party." *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000). Rule 50 "allows the trial court to remove . . . issues from the jury's consideration when the facts are sufficiently clear that the law requires a particular result." *Weisgram v. Marley Co.*, 528 U.S. 440, 448 (2000) (internal quotations omitted). The standard for granting judgment as a matter of law mirrors the standard for granting summary judgment, and "the inquiry under each is the same." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250-51 (1986); *see also Cordis Corp. v. Boston Scientific Corp.*, 658 F.3d 1347, 1357 (Fed. Cir. 2011) ("The question is not whether there is literally *no evidence* supporting the unsuccessful party, but whether there is evidence upon which a reasonable jury could properly have found its verdict.").

A. Plaintiffs Failed To Prove That Ariosa Infringed The '430 Or '794 Patents Either Literally Or Under The Doctrine Of Equivalents

"Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim." *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). "If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law." *Id.* Infringement under the doctrine of equivalents requires the patentee to prove that there is "equivalence between those elements of the accused product and the claimed limitations of the patented invention that are not literally infringed." *Zelinski v. Brunswick Corp.*, 185 F.3d 1311, 1316 (Fed. Cir. 1999). "An element is equivalent if the differences between the element and the claim limitation are 'insubstantial.'" *Id.* One test to determine "insubstantiality" is whether the element performs substantially the same function in substantially

the same way to obtain substantially the same result as the claim limitation. *Id.* at 1316-17. "Insubstantiality" is to be determined by "the perspective of a skilled practitioner [who] provides content to, and limits on, the concept of 'equivalence.'" *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 37 (1997).

No reasonable juror could conclude that Ariosa has infringed the '430 or '794 patents literally or under the doctrine of equivalents. As to the doctrine of equivalents, Plaintiffs did not present any evidence of what would be known by a "skilled practitioner" or how such a person would consider the features for which equivalency is claimed for the jury's consideration. The Court should therefore enter judgment as a matter of law in Ariosa's favor on Plaintiffs' claims of infringement for both the '794 and '430 patents. *See Cordis*, 658 F.3d at 1357 (granting judgment as a matter of law in favor of the defendant after "find[ing] very little evidence to support the jury's verdict that [the claim at issue] was literally infringed").

1. The '794 Patent

Plaintiffs accused Ariosa's Harmony V1 and V2 tests of infringing claims 1, 2, 3, 9, and 13 of the '794 patent. The evidence presented at trial confirms that both accused products are fundamentally different from the '794 patent and fail to practice several required steps of the patent claims. In particular, Plaintiffs failed to provide any evidence that Harmony V2 practices steps 1(a), 1(b), 1(f), or 1(g) of the '794 patent. Additionally, Plaintiffs have not proven that Harmony V1 performs steps 1(a) and 1(b) of the '794 patent. Plaintiffs also failed to present any argument or evidence under the doctrine of equivalents for claim elements 1(a) through 1(e), and only conclusory arguments for elements 1(f) and 1(g), and therefore any such arguments should be precluded as a matter of law. Because several elements of the '794 patent are entirely absent and Plaintiffs have not proven, and cannot prove, infringement of the '794 patent for both Harmony V1 and V2, Ariosa is entitled to judgment as a matter of law.

(a) Harmony V2: No Reasonable Juror Could Conclude That Harmony V2 Practices Steps 1(a) Or 1(b) Of The '794 Patent

Plaintiffs have not proven, because they cannot prove, that Harmony V2 performs steps 1(a) and 1(b) of the '794 patent. The Court's December 11, 2017 claim construction requires that

these steps be performed in the order recited. D.I. 517 at p. 36. With respect to step 1(a), Plaintiffs must demonstrate that Harmony V2 "provid[es] a sample which may contain at least 100 different single-stranded target sequences attached to a first solid support." '794 Patent, Claim 1(a). Plaintiffs' infringement expert Dr. Gregory Cooper expressly recognized that a sample containing single-stranded sequences attached to a solid support thus must be provided *before* the hybridization of probes recited in claim step 1(b). Trial Tr. 998:13-16 ("Q. So then under the Court's claim construction, the single-stranded target sequences must first attach to a solid support, and then hybridize with probes; correct? A. Yes, I believe that's correct."). Plaintiffs cannot make this showing because the evidence confirms that Ariosa never performs step 1(a).

The evidence adduced at trial proves that Ariosa does not provide a sample containing single-stranded target sequences attached to a first solid support (step 1(a)) before hybridization of probes occurs (step 1(b)). In fact, an entirely different process occurs in Harmony V2. The evidence is uncontroverted that in Ariosa's method, the probes are added to the cell free DNA and, only after that, beads (solid support) are added. Trial Tr. 1001:8-18 (Dr. Cooper). As Dr. Cooper admitted, Ariosa introduces the components in Harmony V2 such that double-stranded hybridization complexes are formed *before* any solid supports are introduced. Trial Tr. 1003:13-19 ("Q. So it's saying you take these single-stranded target sequences, and you resuspend and hybridize them with the probes in this step; correct? That's what 13.4 is saying? A. It's describing that as the goal of this step, yes. Q. Okay. And again, this is before any solid support is added to the solution; correct? A. Right."). In other words, there is no evidence that single-stranded target sequences are attached to a solid support in Harmony V2 before hybridization of probes occurs. The testimony is to the contrary. Trial Tr. 1004:16-18 (Dr. Cooper) ("Q. The beads are added two hours ***after*** the probes are added; correct? A. Yes.") (emphasis added).

Illumina's only response to this gaping hole in the proof is Dr. Cooper's sheer speculation that given the number of fragments involved some number of target sequences would exist in the single-stranded form. Trial Tr. 1011:6-13. Plaintiffs, however, never presented any evidence to verify this conclusory assertion. For example, Dr. Cooper acknowledged that he did not do any tests to verify his assertion or present any test results. Trial Tr. 1014:16-19 ("Q. But you didn't do

any lab experiments to try to figure out what's actually going on; correct? A. I would have no capacity to get Ariosa's internal lab samples or products."). The record is devoid of any credible or reliable evidence that single-stranded target sequences are attached to a first solid support. Because Ariosa takes an affirmatively different approach than the patent claims, it is impossible for Plaintiffs to prove, or for a reasonable juror to find, that Harmony V2 practices step 1(a) of the '794 patent.

Next, Plaintiffs failed to prove that Harmony V2 practices step 1(b) of the '794 patent. To prove infringement of step 1(b), Plaintiffs were required to demonstrate that Harmony V2 includes "contacting said target sequences with a probe set comprising more than 100 different single-stranded probes … such that different double-stranded hybridization complexes are formed, each … comprising one of said … different single-stranded probes and one of the different single-stranded target sequences from the sample." In other words, Plaintiffs were required to prove that it is the single-stranded target sequences attached to a solid support (as recited in step 1(a)) that contact and hybridize with the probes. Given that Plaintiffs' own expert has admitted that Harmony V2 forms double-stranded hybridization complexes before any solid support are introduced, no reasonable juror could find that Harmony V2 practices step 1(b) of the '794 patent. Plaintiffs' expert did not provide any support for his argument that step 1(b) takes place. Even his "guess" that 1% of single-stranded targets would remain single stranded such that they could fulfill step 1(a), does not address the their fulfillment of step 1(b). Trial Tr. 1011:8-12. Step 1(b) is never performed and the Court should enter judgment as a matter of law in Ariosa's favor on Plaintiff's claim of infringement for the '794 patent.

(b) Harmony V1: Plaintiffs Failed To Prove That Harmony V1 Performs Steps 1(a) And 1(b)

Ariosa also is entitled to JMOL with regard to the allegations against Harmony V1. As set out in the Court's rulings on claim construction, the '794 patent requires that step 1(a) be performed before step 1(b). D.I. 517 at p. 36. Steps 1(a) and 1(b) require first that single-stranded target sequences attach to a solid support and then that probes contact and hybridize with the

attached target sequences formed in step 1(a). Plaintiffs, however, have adduced no evidence to show that the method of the Harmony V1 test performs the required steps in the recited order.

The testimony of Dr. Cooper confirms this fundamental deficiency in Plaintiffs' case. On cross-examination, Dr. Cooper admitted that, when performing Harmony V1, Ariosa adds the probes, solid support, and target sequence all at once, not in the precise order that steps 1(a) and 1(b) require. Trial Tr. 1017:5-11 ("Q. So that's explaining that, in fact, the beads and the probes are added simultaneously in Version 1; correct? A. That's right. Q. So in neither version of Harmony™ are the beads added first before the probes are added; correct? A. That's right, the beads are not added first before the probes are added."). Plaintiffs' failure to prove that Ariosa performs steps 1(a) and 1(b) in the required order—and as such fails to prove that it performs steps 1(a) and 1(b) at all—prevents a reasonable juror from finding that Harmony V1 infringes the '794 patent. The Court should enter judgment as a matter of law in Ariosa's favor on Plaintiffs' claim that Harmony V1 literally infringes the '794 patent.

(c) Harmony V2: No Reasonable Juror Could Conclude That Harmony V2 Practices Steps 1(f) Or 1(g) Of The '794 Patent

Plaintiffs have failed to present sufficient evidence to demonstrate that Harmony V2 infringes steps 1(f) and 1(g) of the '794 patent either literally or under the doctrine of equivalents. These steps recite, respectively, "immobilizing said different amplicons to a second solid support" and "detecting said different amplicons immobilized to said second solid support, thereby determining whether the sample contains at least 100 different target sequences." Most critically, both of these steps are required to be performed with *amplicons*. The evidence confirms that Harmony V2 does not immobilize and detect amplicons. Instead, the testimony from Dr. Cooper shows that Harmony V2 uses Readout Cassettes for these steps, which are very different from amplicons both because of their size and because they lack a universal priming site. Trial Tr. 1073:9-14 (Dr. Oliphant testimony explaining that amplicons require a universal priming site in order to be amplifiable); *see also* Trial Tr. 1030:13-22 (Dr. Cooper testimony agreeing that "the Readout Cassette doesn't have a universal priming site."). Indeed, because of this, among other things, the cassettes cannot be amplicons. Trial Tr. 1075:19-23 ("Q. And would you please tell the

jury whether the cassette created in the Harmony™ assay is an amplicon? A. No. It's – it's not amplifiable. It does not have a left universal PCR priming site or a right universal PCR priming site, ***so it is clearly not an amplicon***.") (emphasis added). Furthermore, Ariosa actually performed experiments that showed that amplicons (which contain the universal priming sites) will not work in the Harmony V2 test. Trial Tr. 1076:24-1077:23 (Readout Cassettes hybridize to array). This precludes a finding of infringement both literally and under the doctrine of equivalents.

(i) Harmony V2 Does Not Immobilize Amplicons Or Detect Them As Recited In Steps 1(F) And 1(G)

Plaintiffs have failed to offer evidence to support the conclusion that Harmony V2 literally infringes the '794 patent by practicing either step 1(f) or 1(g). The Court's claim construction requires that amplicons are what is replicated from modified probes—which must contain universal priming sites and a sequence that is "capable of substantially hybridizing to a target sequence." D.I. 199 at p. 9, 11. With respect to step 1(f), Dr. Cooper admitted that what gets replicated in Harmony V2—which contains the universal priming sites and a sequence complementary to the cfDNA loci—is destroyed before anything is immobilized to what Illumina calls the second solid support (*i.e.,* the array). Trial Tr. 1030:16-24 (admitting that "what's actually attached to the solid support – the Readout Cassette – lacks the universal priming site, and lacks the sequence that's complementary to the target sequence"). Additionally, he admitted that Readout Cassettes—which lack universal priming sites or sequences capable of hybridizing with the cfDNA loci—are newly created during the process of digesting the amplification products, and therefore the amplification products themselves are not, as replicated, "immobiliz[ed] to a second solid support." Trial Tr. 1030:4-15. There can be no literal infringement of step 1(f) by Harmony V2 because step 1(f) requires that what is actually replicated, not a cassette later created after replication, be immobilized. Trial Tr. 1078:6-14.

Plaintiffs also cannot prove infringement of step 1(g). Step 1(g) builds on step 1(f) by requiring the detection of the amplicons immobilized in step 1(f). As explained above for step 1(f), the Readout Cassettes as referenced in step 1(f) are not literally "amplicons immobilized to said second solid support" as recited in step 1(g). As Dr. Cooper admitted, in Harmony V2,

"amplicons" as recited are enzymatically digested (*i.e.*, cut up) before anything is allegedly "immobilized" to a "second solid support." Accordingly, the "amplicons" are never "immobilized" as recited, and the recited "said different amplicons immobilized to said second solid support" never exist and cannot be "detect[ed]" as required in step 1(g). Plaintiffs have failed to prove literal infringement.

(ii) There Can Be No Infringement Under Doctrine Of Equivalents Because Readout Cassettes Are Not The Substantial Equivalent Of Amplicons

Plaintiffs have also failed to prove any infringement of steps 1(f) and 1(g) under the doctrine of equivalents because they did not present evidence sufficient to demonstrate that Harmony V2's Readout Cassettes are the substantial equivalent of amplicons. *See Zelinski*, 185 F.3d at 1316. In support of their doctrine of equivalents theory, Plaintiffs attempted to present evidence that the immobilization of a Readout Cassette is a "surrogate" for the immobilization of the entire amplification product in Harmony V2. Trial Tr. 979:24-980:5. But none of the evidence presented explained exactly *how* the difference is allegedly insubstantial, or *why* the Readout Cassettes and "amplicons" are interchangeable. At best, Dr. Cooper explained that Readout Cassettes and amplicons both serve the same purpose of detecting the ligation product. Trial Tr. 981: 1-5 ("Q. Is there any other reason why there's no substantial difference? A. Again, because the -- the purpose of that is to detect the amplicon, and that's the purpose that is being served, as is part of the Harmony™ test."). But these "conclusory statements regarding equivalence" between the amplicons and the Readout Cassettes are, as a matter of law, insufficient to allow a reasonable juror to apply the doctrine of equivalents to find infringement. *PC Connector Solutions LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1364 (Fed. Cir. 2005); *Tex. Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996) ("[A] patentee must [] provide particularized testimony and linking argument as to the 'insubstantiality of the differences' between the claimed invention and the accused device or process, … [and] [s]uch evidence must be presented on a limitation-by-limitation basis."); *see also Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1365 (Fed. Cir. 2007). Plaintiffs proffered testimony and evidence is devoid of support that the Readout Cassettes perform substantially the same function, in the same way, and

for the same result. *Genentech, Inc. v. Wellcome Found., Ltd.*, 29 F.3d 1555, 1567 (Fed. Cir. 1994); *Applied Med. Resources Corp. v. U.S. Surgical Corp.*, 147 F.3d 1374, 1381 (Fed. Cir. 2006). Plaintiffs focus solely on the result—the "purpose that is being served"—by the Readout Cassette in the Harmony test. That is insufficient to establish equivalency for *patent infringement*.

Additionally, Dr. Cooper admitted there are key differences between Readout Cassettes and amplicons that would preclude the application of the doctrine of equivalents. *Gauss v. Conair Corp.*, 363 F.3d 1284, 1290 (Fed. Cir. 2004) (reversing a jury's verdict of infringement under the doctrine of equivalents because "[t]he [accused] device operates in an entirely different way"). For instance, Dr. Cooper testified that, unlike amplicons, Readout Cassettes lack a universal priming site. Trial Tr. 1030: 13-15; Trial Tr. 1032:17-21. Dr. Oliphant further explained that applying amplicons to an array produces a very different result than applying Readout Cassettes to an array because of the principle of steric hindrance. Trial Tr. 1076:24-1077:7. Moreover, Dr. Oliphant explained that based on Ariosa's experiments, amplicons actually fail to produce a signal, and therefore do not work, in Harmony V2. Trial Tr. 1076:24-1077:2.

For step 1(g), Dr. Cooper presented a conclusory argument as to the timing of detection, arguing that detection at any time serves the same purpose leading to the same result. Trial Tr. 983:6-20. However, he never presented any argument as to *how* or *why* the two modes are the same. *Id.*; *see Genentech*, 29 F.3d at 1567; *Applied Med.*, 147 F.3d at 1381.

The Court should therefore enter judgment as a matter of law in Ariosa's favor with respect to Plaintiffs' claim that Harmony V1 and V2 infringe the '794 patent because there is no legally sufficient evidentiary basis for a reasonable jury to conclude that Harmony V2 practices steps 1(a), 1(b), 1(f), or 1(g) of the '794 patent or that Harmony V1 performs steps 1(a) and 1(b) of the '794 patent.

2. No Reasonable Jury Could Conclude That Harmony V1 Practices Claim 1 Of The '430 Patent

Plaintiffs' allegations that Ariosa infringes claims 1, 4, and 7 of the '430 patent with respect to Harmony V1 are deficient as a matter of law. Because the evidence Illumina presented

confirms that Ariosa utilizes a fundamentally different approach than the '430 patent, Ariosa is entitled to JMOL on this allegation of infringement.

Plaintiffs have not provided evidence for a reasonable jury to find that all elements of the '430 patent are met by Ariosa's Harmony V1. For example, there is no evidence that Ariosa determines fetal aneuploidy according to the requirements of element 1(f) of the '430 patent. This element requires "determining the presence or absence of fetal aneuploidy" using "a number of enumerated sequence reads corresponding to the first chromosome" and "a number of enumerated sequence reads corresponding to the reference chromosome" identified in other claim elements. Ariosa does not "determine the presence or absence of fetal aneuploidy" or make a determination by comparing sequence reads from a test chromosome to reads from "the reference chromosome." Trial Tr. 1042:14-16. Instead, the evidence is undisputed that Ariosa's Harmony V1 instead uses complex mathematical models in the FORTE algorithm to calculate a risk score. *See* Trial Ex. 461A (Sparks paper describing Ariosa mathematical approach); Trial Tr. 1044:7-25 (Dr. Cooper admitting he did not consider FORTE in his infringement analysis). Illumina also cannot prove that Harmony V1 practices element 1(b). There is no evidence that Ariosa uses a "first chromosome tested for being aneuploid" and a "reference chromosome[]" that are "different." Similarly, Plaintiffs fail to argue infringement under the doctrine of equivalents or presented only conclusory arguments of "equivalency" such that judgment as a matter of law is appropriate.

B. Ariosa Is Entitled To JMOL On Plaintiffs' Allegations Of Willful Infringement

The evidence Plaintiffs presented cannot support a finding of willful infringement. In *Halo Electronics, Inc. v. Pulse Electronics, Inc*., 136 S. Ct. 1923 (2016), the Supreme Court instructed that willful infringement is "a 'punitive' or 'vindictive' sanction" that is "reserved for egregious cases of culpable behavior." *Id*. at 1932-35. "[I]n order to be liable for willful infringement, pursuant to 35 U.S.C. § 284, the infringing conduct must be 'willful, wanton, malicious, [in] bad-faith, deliberate, consciously wrongful [or] flagrant." *Id*. at 1932. It can also be described as action that was taken "for no other purpose than to steal the patentee's business" or "egregious infringement behavior." *Id*. at 1932. There is no evidence of such behavior in this case.

The record is devoid of evidence on which Plaintiffs can sustain their burden of proving that Ariosa engaged in culpable, deliberate, or egregious behavior to willfully infringe either the '794 or '430 patent. To the contrary, the evidence supports only the conclusion that Ariosa acted reasonably and in good faith and maintained a sincere belief, formed well before Plaintiffs brought suit, that Ariosa did not infringe the '430 or '794 patents and that these patents were invalid.

The testimony of several witnesses presented during Plaintiffs' case establishes a lack of willfulness. For instance, John Stuelpnagel, Ariosa's Executive Chairman, testified that in May 2011 based on his "personal analysis" he believed that Ariosa had the "freedom to operate" with respect to the '794 patent. Trial Tr. 709:18-710:1; Trial Ex. 513. Dr. Stuelpnagel also testified that he shared this analysis with Illumina in May 2011. Trial Tr. 722:22-24 ("Q. You came to those [freedom to operate] conclusions on your own, and then you presented them to Illumina; correct? A. Yes, I did."). Illumina presented no evidence to the contrary. . This case is similar to *Radware Ltd. v. F5 Networks, Inc.*, 2016 WL 4427490 (N.D. Cal. Aug. 22, 2016), where the court granted judgment as a matter of law for defendant on plaintiff's willful infringement claim because "there was no claim that Radware sent a pre-suit notice letter to F5 to warn F5 of its infringement." *Id.* at *3.

Dr. Stuelpnagel also testified to other facts that undermine any allegation of willfulness for the '794 patent. Dr. Stuelpnagel testified that, following Ariosa's negotiations with Illumina for the parties' 2012 Sale and Supply Agreement, "the way the definitions ended up in the Sale and Supply Agreement created, without any doubt, that Ariosa would have 'Freedom to Operate,' with using Illumina Core IP Rights." Trial Tr. 778:23-779:1. Finally, Dr. Stuelpnagel testified to a conversation that he had with Illumina personnel in January 2014 in which he conveyed two points: "We don't practice the '794 patent. We don't infringe it. Two, the patent is probably invalid." Trial Tr. at 789:9-11. Dr. Stuelpnagel's testimony establishes that Ariosa not only maintained a consistent, good-faith belief of non-infringement and invalidity for the '794 patent, but also shared these opinions repeatedly with Illumina.

Similarly, with respect to the '430 patent, Jay Flatley, Illumina's CEO, testified that Illumina received a letter from Ariosa on January 24, 2014—approximately four months before

Plaintiffs filed suit—in which Ariosa laid out its reasoning for why Ariosa had not breached the SSA. Trial Tr. 682:18-20; Trial Ex. 363. Among these reasons was Ariosa's belief that "Ariosa's activities do not infringe [the '430 and another patent that is no longer in the case] and because the patents are invalid." Trial Ex. 363. Mr. Flatley admitted that Illumina did not respond to this letter. Trial Tr. 684:12-13. As was the case with Ariosa's freedom to operate opinion, Plaintiffs cannot demonstrate the egregious conduct that is necessary to demonstrate willful infringement when they also admit that there was "no need" to respond to Ariosa's assertions of non-infringement and invalidity. Mr. Flatley further testified that, after reaching out to Ariosa in 2013 regarding SSA negotiations, "[Ariosa's] claim was that they didn't need the '430 patent; that they had done their FTO analysis." Trial Tr. 614:16-21.

Finally, testimony from other witnesses shows Ariosa designed its product well before the '430 patent existed. Rich Rava, a Scientific Co-Founder of Verinata, admitted that when Ariosa first launched its Harmony V1 test in March2012, the '430 patent had not issued, and indeed that the language of the asserted claims did not exist, even in application form. Trial Tr. 336:10-15; 337:1-6. Ariosa's conduct with respect to the '430 patent can hardly be characterized as "egregious infringement behavior" or actions that are taken "for no other purpose than to steal the patentee's business" when Ariosa launched its non-invasive prenatal testing well before the asserted claims of the '430 patent has even been drafted by Verinata. *See Erfindergemeinschaft Uropep Gbr v. Eli Lily & Co.*, 2017 WL 2190055, at *2 (E.D. Tex. May 18, 2017) (entering judgment as a matter of law in favor of defendant on the issue of willfulness because "Lilly clearly developed the [infringing product] without consulting the '124 patent, which is a factor that cuts against a finding of willfulness and an award of enhanced damages.").

Plaintiffs have offered no evidence showing that Ariosa's conduct rises to the level of the "willful, wanton, malicious, bad-faith, deliberate, consciously wrongful [or] flagrant" conduct required by *Halo*. Indeed, from the evidence that Plaintiffs have presented, the exact *opposite* is true—namely, that Ariosa maintained and communicated to Plaintiffs a reasonable, good-faith belief that the '430 and '794 patent were invalid and not infringed.

The question of willful infringement is not a close call. There is no way that a reasonable juror could conclude that Ariosa willfully infringed either the '794 or '430 patents, and the Court should accordingly enter judgment as a matter of law in Ariosa's favor on the issue of willful infringement.

C. Ariosa Is Entitled To JMOL of No Infringement Because The Evidence In Plaintiff's Case-In-Chief Confirms Ariosa Had a License

The grant of a license to practice a patented technology provides a complete defense to a claim that actions that fall within the confines of the license constitute acts of infringement. *Intel Corp. v. VIA Tech., Inc.*, 319 F.3d 1357, 1364 (Fed. Cir. 2003). The evidence presented in Plaintiffs' case thus far at trial would require a reasonable jury to conclude that Plaintiffs granted Ariosa a license. The evidence establishes that the 2012 Sale and Supply Agreement ("SSA"), granted an express license to both the '430 and '794 patents because the "Core IP Rights in Goods," as defined in the SSA, include the '794 and '430 patents. Thus, as a matter of law, Ariosa cannot be held liable for infringement of either patent.

Multiple Illumina executives admitted that the SSA provides "a license to Core Sequencing IP when you buy the reagents and use them in the field for the intended purpose." Trial Tr. 532:7-10 (testimony of Dr. Naclerio). Similarly, Mr. Flatley explained that Ariosa had a license to Core IP Rights in Goods when operating in the Customer Field of Use. Trial Tr. at 662:7-15 ("Q. Okay. But when operating in that Customer Field of Use, it had a license to what's written here: Core IP Rights in Goods; correct? A. That's the general idea of this license, yes, Mm-hm.").

John Stuelpnagel provided uncontradicted testimony that the SSA included rights for Ariosa's planned use of Illumina's products. Dr. Stuelpnagel , when negotiating the SSA, testified the parties exchanged mark-ups of the SSA with proposed modifications. Trial Tr. 812:2-13. During one round of mark-ups, he testified how Ariosa sought to clarify with Illumina what "core IP rights in goods" meant. *Id.*; Trial Ex. 1172. He further testified how Illumina did not want to list the exact IP contained within the "core IP rights" on the grounds that this would be "too cumbersome," Trial Tr. 814:23-25, and instead proposed the inclusion of a clause stating that,

based on Illumina's knowledge at the time, Ariosa's "planned use" of Illumina's products did not require any further licenses. Trial Tr. 819:12-19; *see also* Trial Tr. 1036:25;1037:8 (Dr. Cooper's discussion of how a core part of his infringement analysis for V1 is based on Ariosa's use of Illumina's sequencing equipment).

The unrebutted testimony at trial establishes 1) that the SSA provides a license to the core IP rights in goods and 2) that Illumina intended the core IP rights in goods to include Ariosa's "planned use" of Illumina's '430 and '794 patents. The SSA thus established what Dr. Naclerio described as "a sort of an implied license" to use Illumina's intellectual property. Trial Tr. 531:16-21. A reasonable juror could only find that Ariosa cannot infringe because the SSA provide Ariosa with a license to the '430 and '794 patents.

D. Ariosa Is Entitled To JMOL On Damages Because Of Fundamental Defects In Plaintiffs' Reasonable Royalty and Lost Profits Evidence

Plaintiffs failed to present a legally sound basis for the jury to award either a reasonable royalty or lost profits for any alleged infringement of the '430 or '794 patents. Plaintiffs' damages expert, James Malackowski, presented damages theories that failed to perform the required apportionment to ensure that the claimed reasonable royalties were based only on the value of patented aspects of the accused products and, for lost profits damages, (1) failed to prove the existence of non-infringing alternatives; (2) failed to delineate between the two plaintiffs and their distinct patents and claims, improperly included sales made by third parties when determining Illumina's lost profits; (3) included third parties' profits in lost profits calculations; and (4) assumed without support when calculating lost profits that all of Ariosa's sales would have gone to Illumina's "partners" or Verinata had Ariosa not been able to perform the Harmony test. Any one of these three errors mandates that the issue of patent damages be removed from the jury's consideration because Mr. Malackowski's erroneous theories are not sufficient to sustain an award of damages and "cannot help but skew the damages horizon for the jury." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011) (granting a new trial after plaintiff's expert presented damages numbers to the jury that were based on legally flawed theories because inaccurate numbers).

In ruling on Ariosa's *Daubert* motion to preclude Mr. Malackowski's testimony, the Court specifically identified these three issues as areas where Plaintiffs' damages evidence may be legally insufficient. The Court ultimately deferred whether to exclude Mr. Malackowski's testimony depending on whether the trial testimony showed that Mr. Malackowski indeed failed to perform a proper apportionment analysis and improperly calculated lost profits. Dkt. 561 at pp. 5, 8. The record at trial exposes and confirms each of the fundamental defects in Mr. Malackowski's damages theories that the Court previewed in its *Daubert* ruling. Indeed, Mr. Malackowski directly admitted to performing his reasonable royalty and lost profit calculations in a manner that is contrary to well-developed applicable law. As such, Ariosa renews its *Daubert* motion seeking to strike and exclude the testimony. Because Plaintiffs did not present a legally sound basis for the jury to determine reasonably royalty or lost profits damages, Ariosa is entitled to judgment as a matter of law on damages.

1. Plaintiffs' Reasonable Royalty Theory Fails As A Matter of Law Because Plaintiffs Failed To Apportion

It is a bedrock principle of Federal Circuit damages law that when an accused product or method includes patented and non-patented components a damages expert must properly apportion in calculating reasonable royalties. The mandatory apportionment analysis requires that "the ultimate combination of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014); *see also Lucent Tech., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1322 (Fed. Cir. 2009) (overturning a jury's reasonable royalty award because the plaintiff's expert failed to account for the fact that the patented feature was a tiny part of the device and thus "the only reasonable conclusion is that most of the realizable profit must be credited to non-patented elements").

The Federal Circuit just days ago reiterated the importance of apportionment in overturning a jury's award of reasonable royalty damages because the patentee's expert "failed to apportion damages to the infringing functionality." *Finjan, Inc. v. Blue Coat Sys., Inc.*, -- F.3d. --, 2018 WL 341882, at *8 (Fed. Cir. Jan. 10, 2018). *Finjan* involves facts similar to those at issue in

this case. In *Finjan*, computer security software was alleged to infringe. The software contained a number of components, including a software component known as "DRTR" which performed the allegedly infringing malware detection. DRTR also performed non-infringing features, such as categorizing websites based on their content. *Id.* In calculating damages, the patentee's expert apportioned royalties to DRTR. *Id.* The Federal Circuit found that apportioning the accused device down to DRTR was insufficient because, even though "DRTR is the smallest, identifiable technical component tied to the footprint of the invention," DRTR's non-infringing categorization capabilities had value (the court provided the example of employers wanting to categorize websites to prevent employees from using social media sites while at work). *Id.* at *8-9. Ultimately, the Federal Circuit concluded that "the fact that Finjan has established a royalty base based on the 'smallest, identifiable technical component' does not insulate them from the 'essential requirement' that the 'ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.'" *Id.* at *9 (citing *Ericsson*, 773 F.3d at 1226).

Mr. Malackowski's damages testimony here tracks the analysis that the Federal Circuit found legally insufficient in *Finjan*. Critically, Mr. Malackowski conceded that he did not apportion out any value for Ariosa's FORTE algorithm which is at the heart of calculating the risk score for patients.[2] FORTE is an extremely valuable aspect of the products that is not alleged to infringe. For example, Plaintiffs' technical expert, Dr. Gregory Cooper, did not point to FORTE for any element of the '794 patent. Similarly, Plaintiffs are not relying on FORTE for their infringement claims on the '430 patent. Harmony V2 is not accused at all of infringing the '430 patent, and the evidence is uncontroverted that Ariosa made no changes to FORTE from Harmony V1 to Harmony V2. As such, FORTE is a non-patented component of the accused products and not relevant to the damages for the alleged infringement of either patent. Plaintiffs' damages theory and evidence failed to apportion in order to remove the value for FORTE from the damages determination.

[2] Because no transcript is yet available of Mr. Malackowski's January 17, 2018 testimony, Ariosa is unable to provide citations within this motion.

This Court recognized in ruling on Ariosa's Motion to Preclude Malackowski's Testimony that it would "revisit this issue if evidence at trial shows the Harmony Test includes unpatented features for which apportionment is required." Dkt. 561 at p. 5. The undisputed evidence shows that this is exactly what Mr. Malackowski has done—which the Federal Circuit has found to be improper. The Court should revisit its *Daubert* ruling, exclude Mr. Malackowski's testimony as insufficient under settled law and enter judgment as a matter of law in Ariosa's favor on the issue of reasonable royalty damages for the '430 and '794 patents.

2. Plaintiffs Failed To Demonstrate An Entitlement To Lost Profits

In addition to presenting a legally erroneous reasonable royalty calculation to the jury, Plaintiffs have presented a lost profits calculation that suffers from three fatal flaws: (1) a failure to prove non-infringing alternatives, (2) a failure to quantify alleged lost sales by patentee, and (3) the improper inclusion of third-parties' profits. The combination of these three issues precludes a reasonable jury from awarding Plaintiffs lost profits damages and mandates that the Court grant JMOL in Ariosa's favor on the issue of lost profits.

(a) Failure To Prove Non-Infringing Alternatives

The patentee bears the burden of proving that lost profits are an appropriate measure of damages. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 1165 (Fed. Cir. 1991). As part of that burden, the patentee is required to demonstrate the four *Panduit* factors, which include the requirement that, for each asserted patent, there is an "absence of non-infringing alternatives" to the patented feature. *Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275, 1285 (Fed. Cir. 2017). It is necessary for each patentee to satisfy this burden in order to "tie[] lost profit damages to specific claim limitations and ensure[] that damages are commensurate with the value of the patented features." *Id.* "For example, if the customer would have bought the infringing product without the patented feature or with a different, non-infringing alternative to the patented feature, then the patentee cannot establish entitlement to lost profits." *Id.* at 1286. The evidence that Plaintiffs presented at trial falls far short of satisfying this burden for both the '430 and '794 patents, which precludes Plaintiffs from recovering lost profit damages.

At trial, Mr. Malackowski provided no testimony from which a reasonable jury could find an absence of non-infringing alternatives to the '430 patent. To the contrary, he admitted that Ariosa already has implemented a "non-infringing alternative" to the '430 patent, and that the market accepted it. It is undisputed that, as of today, no product on the market uses any feature of the '430 patent. Verinata's own products have never practiced the '430 patent. Further, no evidence was presented at trial that any of the dozens of third party products on the market have ever practiced the '430 patent.

Similarly, Mr. Malackowski provided no testimony demonstrating an absence of non-infringing alternatives to the '794 patent. This is unsurprising because, with the sole exception of its allegation against Ariosa in this case, Illumina does not contend that any of the many competitors in the NIPT industry have ever used any features of the '794 patent. Mr. Malackowski admitted as much at trial. Thus, Plaintiffs have not demonstrated that they have met all four *Panduit* factors for either the '430 or '794 patents, and therefore, the jury many not consider the issue of lost profits damages.

(b) Failure To Quantify Allegedly Lost Sales By Patentee

In order to be entitled to lost profits, it is settled that the patentee must provide a specific accounting of the patentee's own sales lost to the accused infringer, and that "a patentee may not claim, as its own damages, the lost profits of a related company." *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 778 F.3d 1365, 1375 (Fed. Cir. 2015) (citing *Poly-Am., L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1311 (Fed. Cir. 2004)); *Mars, Inc. v. Coin Acceptors, Inc.*, 527 F.3d 1359, 1366-67 (Fed. Cir. 2008) (rejecting argument that "by virtue of the parent-subsidiary relationship and its consolidated financial statements, 'all [of the subsidiary's] lost profits were inherently lost profits of [the parent patent holder].'").

Plaintiffs' evidence is deficient as a matter of law. Plaintiffs did not identify any sales allegedly lost specifically by Verinata as a result of alleged infringement of the '430 patent, or sales allegedly lost by Illumina as a result of alleged infringement of the '794 patent. Instead, Mr. Malackowski presented an amalgamation to the jury that treats Verinata and Illumina and other related entities as though they were one entity asserting the same patent.

Moreover, Mr. Malackowski admitted that a substantial portion of the alleged lost sales that he included in his lost profits analysis are foreign sales. To the extent that any Illumina-related entity would have captured any of these sales, Mr. Malackowski was unable to provide any support for his assertion that it would have been Illumina or Verinata themselves, yet his lost profits calculations assume that this 100% capture rate was achieved.

In ruling on the *Daubert* motion, the Court deferred a final ruling on whether to exclude Mr. Malackowski's testimony on lost profits depending on whether he included profits attributable to others. Specifically, the Court "defer[ed] decision [on the issue of whether to exclude this portion of Mr. Malackowski's opinion] until hearing evidence on whether Illumina captured profits on foreign sales." Dkt. 561 at p. 8. Plaintiffs have now had the chance to put on evidence to show exactly which sales Illumina and Verinata each captured, and to prove that all of the sales that Mr. Malackowski factored in to his lost profits calculations are precisely keyed to the sales of the patentee itself—*i.e.* to Illumina or Verinata as individual entities. But they did not do so. Having failed to present damages evidence on which a reasonable jury can award lost profits damages, the Court should exclude and strike Mr. Malackowski's testimony on this issue as well, preclude lost profits damages from being submitted to the jury, and grant Ariosa judgment as a matter of law.

(c) Including Third Parties' Profits In Lost Profits Calculations

Mr. Malackowski improperly included Illumina's alleged lost test fees in his lost profits calculations. These fees may not be included in Illumina's lost profits calculations because Plaintiffs' own witnesses and counsel characterized these alleged lost test fees as royalties. As the Federal Circuit specifically held in *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 778 F.3d 1365 (Fed. Cir. 2015), "lost royalty payments [a]re not recoverable" as lost profits because "[t]o be entitled to lost profits, … the lost profits must come from the lost sales of a product or service the patentee *itself* was selling." *Id.* at 1376. While royalty payments for an asserted patent might be recoverable as lost royalty payments, they are not recoverable as a form of lost profit damages. *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1220 (Fed. Cir. 1993) (finding that patentee was not entitled to lost profits damages due to its inability to satisfy the *Panduit*

factors but permitting the patentee to collect "lost royalties (on amounts Windsurfing's licensees would have paid 'but for' the infringement) and reasonable royalties (on amounts of any other BIC use, if any, of the patented invention)").

Plaintiffs cannot recover under an alternative "lost royalty" theory for two reasons. First, they have not asserted any such theory – instead, Plaintiffs' expert relies exclusively on the *Panduit* test and seeks "lost profits." Nor would such a theory have been viable in this case had Plaintiffs asserted it. The "test fee" royalties in this case were not for the asserted patents but, rather, for a patent pool that (1) did not include the '794 patent and (2) did not exist until the time Ariosa switched to Version 2, which is not accused of infringing the '430 patent.

The test fees clearly are not recoverable under the lost profits theory on which Plaintiffs rely. For instance, the trial testimony of Dr. Jeffery Bird, who was an executive officer at Verinata and then at Illumina, confirms that test fees are not "a product or service" but rather are being presented by Illumina in this trial as being equivalent to royalties:

> **Q.** And this is referring to a **royalty opportunity**. So you're talking as Verinata to Illumina about selling Verinata to Illumina. What does royalty opportunity have [to] do with that?
> **A.** So we were having a discussion with Illumina about the idea that they could use our intellectual property to broadly make the test available, and that **they could receive a royalty or a per patient test fee from their customers**, as they – as they made that test available. One of the things that Jay and the management team were worried about was competing with their customers. And they did not necessarily want to be in the business of making and selling the test the way Verinata was doing. And it seemed to be their preference, instead -- and we thought it was a reasonable idea, although it was a different business model than we had -- for us to potentially close the lab, and instead for them to license IP to lots of people to perform the tests. So this talks about financially what that might look like if you were to charge **a per-test fee, or you could also call it a royalty**.
>
> Trial Tr. 235:24-236:18 (emphasis added).

Similarly, Dr. Nicholas Naclerio, another Illumina executive, expressly presented the test fees as royalties:

> **Q.** Okay. And why do you prefer **the per-test fee structure for this large royalty – this large licensing program** that you just said is one piece of supplying the equipment?
> **A.** It's -- there are a lot of factors that go into it. I think at the end of the day, it's a relatively simple method. If – if – you know, **the alternatives are, we – we**

> **calculate some kind of royalty based on sales … So the simple thing for us was just to say, "Look, we're going to get so much per test."**
>
> Trial Tr. 458:23-459:16 (emphasis added).

Finally, Plaintiffs' counsel, when seeking to offer a document purporting to summarize aspects of various Illumina Supply Agreements, again confirmed that Illumina is presenting the Supply Agreement test fees as "royalties," stating **"we have many licensees who are paying per test royalties**." Trial Tr. 541:14-15 (emphasis added).

The testimony from Drs. Bird and Naclerio and the arguments from Illumina's counsel make clear that Illumina has affirmatively presenting the "test fees" charged to third parties as "royalties" and argued that these lost royalties can be collected as lost profits. As this Court has already recognized, under *Warsaw*, the profits that a third party allegedly would have realized and would have remitted to the plaintiff but for the defendant's infringement are not collectable as lost profits. *Warsaw*, 778 F.3d at 1376; Dkt. 561 at pp. 7-8 ("*Warsaw* appears analogous to the situation here."). It was therefore legal error to present the portion of Mr. Malackoswki's lost profits calculation that rests on Illumina's lost test fees to the jury.

Plaintiffs similarly provide no evidence to support their inclusion in lost profits calculations the amount of downstream revenue from so-called "convoyed" reagent sales to the third parties who compete with Ariosa. The case law makes clear why reagent sales revenues are not properly included. *American Seating Co. v. USSC Group, Inc.*, 514 F.3d 1262 (Fed. Cir. 2008), confirms that the convoyed sales doctrine is not about downstream sales by a patentee to third parties who, in turn, allegedly lost sales to the defendant. Rather, that doctrine permits a patentee that loses a sale of a patented item to also recover lost revenue for "unpatented components sold with a patented item," if they "together were considered to be components of a single assembly or parts of a complete machine, or they together constituted a functional unit." *Id.* at 1268. In *Warsaw*, the Federal Circuit held that the patentee could not recover lost sales of "fixations" as convoyed sales because "Warsaw never presented testimony that the fixations it sold . . . had no independent function—that is, that they would not work as well in other surgeries not involving the patented technologies." *Warsaw*, 778 F.3d at 1376.

Here, Plaintiffs similarly did not present evidence that Illumina's reagents have no function independent of the patented products. To the contrary, Illumina's entire argument at trial was that those reagents do not even "pertain" to Illumina's '794 patent. Indeed, Mr. Malackowski described Ilumina's reagents as a commodity comprising a component of its overall annual revenues.

Mr. Malackowski's lost profits calculations improperly include an amalgamation of revenues from corporate entities not limited to the patentee itself, along with a collection of downstream IP "fees" and "reagent sales" based entirely on sales allegedly lost by third parties. These items cannot be included In the analysis. Accordingly, Plaintiffs have not presented a lost profits calculation that could serve as the basis for a valid judgment. *See Poly-Am.*, 383 F.3d at 1311-12 (denying lost profits of sister corporation as a matter of law); *Warsaw*, 778 F.3d at 1376 (rejecting as a matter of law lost profits claim for lost fees from licensees as "lost profits must come from the lost sales of a product or service the patentee itself was selling"); *Volterra Semiconductor Corp. v. Primarion, Inc.*, 2013 WL 6905555, at *18 (N.D. Cal. Nov. 18, 2013) (denying recovery of lost profits of subsidiary by parent).

(d) Unsupported Assumption That All Ariosa Sales Would Have Gone To Verinata Or Illumina

The Federal Circuit has long required that a patentee seeking lost profits present "sound economic proof" of "a reconstruction of the market, as it would have developed absent the infringing product, to determine what the patentee 'would have made'" in the absence of the accused product. *Grain Processing Corp. v. Am. Maize Prod. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999). Here, Mr. Malackowski's analysis fails to provide an economic model of the "but for" market. To the contrary, he expressly relies upon assumptions that contravene fundamentals of economics such as the law of demand.

Mr. Malackowski's admitted that the lost profits calculations that he presented to the rest on the assumption that 100 percent of Ariosa's worldwide sales would have gone to Verinata or one of the plaintiff's "partners," which pay license fees or purchase supplies from an Illumina-related entity. But he also admitted that Ariosa's product is, on average, much more affordable than Verinata's and that many Ariosa units that he included in his calculations were not revenue-

bearing at all. At trial, Mr. Malackowski had no explanation for how he can construct a reliable "but for" world on the assumption that 100% of persons who received an Ariosa test would have paid on average $411 for a different test—likely because there is no explanation for an assumption that ignores one of the most basic rule of economics: the law of demand. "[I]n a credible economic analysis, the patentee cannot show entitlement to a higher price divorced from the effect of that higher price on demand for the product." *Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1357 (Fed. Cir. 2001). In constructing a hypothetical "but for" market, "[a]ll markets must respect the law of demand," which counsels among other things that "consumers almost always purchase fewer units of a product at a higher price than at a lower price[.]" *Id.* (emphasis added).

Further, even though Dr. Rava admitted that, without Ariosa, the NIPT segment of the market would have been smaller, Trial Tr. 370:11-16, Mr. Malackowski stated that he did not adjust the size of the NIPT market when constructing a "but for" world in which Ariosa did not perform its allegedly infringing tests. Ariosa's success in expanding sales in the NIPT segment of the market was, as Mr. Malackowski conceded, in part due to Ariosa's own non-patented technical contributions, "capital deployment," "sales and marketing," and "validation" efforts.

In view of Mr. Malackowski's admissions that Ariosa's price is significantly lower and that Ariosa contributed to growing the NIPT segment of the market, Mr. Malackowski's conclusion that (1) every patient who used Ariosa's screen (even those who Ariosa did not receive payment from) would pay higher prices for a competitive product instead, and (2) that the NIPT segment of the market would have been exactly the same without Ariosa, easily falls into the category of "junk science" that cannot help but skew the jury's damages analysis. Mr. Malackowski's faulty construction of the "but for" world precludes the jury from considering the issue of lost profits damages and requires entry of JMOL in Ariosa's favor.

III. CONCLUSION

Ariosa respectfully moves for judgment as a matter of law under Rule 50(a) of the Federal Rules of Civil Procedure. A reasonable jury could not find in favor of Plaintiffs on infringement,

willfulness and damages. Because Plaintiffs case is deficient as a matter of law, the Court should not present those matters to the jury and should enter JMOL in favor of Ariosa.

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Respectfully submitted,

IRELL & MANELLA LLP

By: */s/ David I. Gindler*
Attorneys for Defendant and Counterclaim-Plaintiff ARIOSA DIAGNOSTICS, INC.